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Chapter 9

The effect of suspense structure on felt suspense and narrative absorption in literature and film

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Abstract

The present study was to further the understanding of the conceptual relationship between narrative absorption, that is the intense engagement with a story world, and felt suspense, that is the anticipation of a narrative outcome event. To this end, a media comparative online experiment was conducted with a 2 (Media format: film vs. literature) × 2 (Suspense structure: diegetic vs. non-diegetic delay) × 2 (Stories) between subject design. Results revealed a complex relationship among felt suspense, attention, emotional engagement, and transportation, showing the high importance of attention in felt suspense, and the moderating effect of media format and gender. Findings indicate that non-diegetic suspense delay unlike diegetic suspense decreases felt suspense and narrative absorption independently of media format.

Keywords: Absorption, narrative, literature, film, suspense, discourse structure, delay

1. Introduction

Statements like 'I was sitting on the edge of my seat waiting to see what would happen next' or 'this book was a real page turner' are typically associated with absorbing media experiences of a specific type: felt suspense. Felt suspense and narrative absorption are closely related, and this relationship occurs in both reading and film viewing experiences (Ortony, Clore , & Collins, 1988; Tal-Or & Cohen, 2010; Kuijpers, 2014; Doicaru, 2016; Bezdek & Gerrig, 2016), even though a contrast between the two media is often assumed (cf. Chatman, 1980). Despite the numerous studies on felt suspense (e.g., Bezdek, 2012; Bezdek, Gerrig, Wenzel, Shin, Revill, & Schumacher, 2015; Brewer & Lichtenstein, 1982; Zilmann, 1991), and on the relationship between felt suspense and narrative absorption (e.g., Bezdek & Gerrig, 2016; de Graaf & Hustinx, 2011), the nature and the media specificity of the relationship between the two have remained unclear.

We assume that narrative form is crucial in eliciting suspense and absorption. However, there are qualitative differences between absorbing *reading* and *viewing* experiences and the role felt suspense plays in them. Research has shown how narrative structure factors can evoke felt suspense (e.g., Brewer & Lichtenstein, 1982; de Wied, 1991; 1995; Kuijpers, 2014; Doicaru, 2016, Knobloch, Patzig, Mende, & Hastall, 2004; Knobloch-

Westerwick & Keplinger, 2006), among which delay is one of the most investigated (e.g., de Wied, 1991; 1995; Kuijpers, 2014; Doicaru, 2016). However, we are not aware of any research on how the style of the delay structure influences the relationship between delay and felt suspense, or between felt suspense and narrative absorption. Thus we examine whether the semantic relationship among the delay structure and the outcome event affects responses in viewers and readers. This chapter addresses these questions with a media comparative experimental study investigating the relationship between felt suspense and narrative absorption in film and literature.

1.1. Narrative suspense structures

Several studies have investigated the effect of specific text features on felt suspense in viewers or readers (Brewer & Lichtenstein, 1982; Knobloch-Westerwick & Keplinger, 2006; Knobloch et al, 2004; Hoeken & van Vliet, 2000; Doicaru, 2016; Kuijpers, 2014; Zillmann & Cantor, 1977; Comisky & Bryant, 1982). In short, the felt suspense depends on an interaction between certain features of the narrative (e.g., narrative structure, character likeability, likelihood that the outcome event is negative) and the reader or viewer's involvement with those features.

Suspense scenes consist of three elements: initiating event, outcome event and delay. The third element refers to the narrative details put in the story after the initiating event in order to delay the unfolding of the outcome event (Brewer & Lichtenstein, 1982; Doicaru, 2016; de Wied, 1991; 1995). According to the Structural-Affect Theory (SAT: Brewer & Lichtenstein, 1982), an initiating event sets the expectation that a highly relevant outcome event will soon take place. These expectations, the uncertainty around them and the temporal proximity of the outcome event create a high level of interest and tension in audiences (e.g., Tan & Diteweg, 1996).

Starting from this basic narrative structure of suspense, authors and directors can increase felt suspense by adding delay before the outcome event. One of the most typical techniques for this is inserting additional descriptions/shots between the initiating event and outcome event (de Wied, 1991; 1995; Doicaru, 2016; Kuijpers, 2014). An important characteristic of delay editing is the relationship between the edited inserts and the main story events. Based on this, we can differentiate diegetic and non-diegetic delay. The term *diegesis* reflects the elements of the fictional world, such as the characters, setting, sounds, and events. *Diegetic delay* postpones the outcome event with inserted shots internal to the story world (e.g., an image of a clock showing the passing time; the clock is at the location where the action takes place). In the case of diegetic delay, the semantic relation between the inserts and the on-going story events is usually

straightforward; the inserts are often directly related to what happens in the story. For example, in written text they can be extra descriptions of the location, or the state of mind of the characters, whereas in film it can be done with extra shots of details within the scene, including close-ups of the characters.

Elements external to the diegesis (for example, soundtrack music that has no source in the story world, or a voice-over narrator who does not appear in the movie) are *non-diegetic* or *extra-diegetic* (Pramaggiore & Wallis, 2005). A technique commonly used to increase felt suspense is to insert non-diegetic animated sequences into live action movies (we see examples for this in *Natural Born Killers*; *Eraserhead*; *Watchmen*; or *Run Lola Run*).

Delays can have different degrees of relevance to the main event. Diegetic delays have a direct semantic relation to the main event, whereas in case of non-diegetic delays the semantic relation of the inserted events to the main event is often less obvious. In the case of non-diegetic delays the inserted events have a semantic or metaphoric connection to the ongoing events, while not necessarily being directly related to the story (cf. as in intellectual montage, Eisenstein, 1977).

Diegetic delay is rather common in literary and film genres, and readers and viewers are quite familiar with it as a narrative technique. Consequently, comprehending a diegetic delay requires less cognitive effort from recipients (e.g., Lang, Geiger, Strickwerda, & Sumner, 1993). On the other hand, the

understanding of non-diegetic delay requires more cognitive effort from readers and viewers, as they need to figure out the semantic connection among events for themselves. According to Eisenstein (1977), this technique works at a metaphoric level: shots that are not related to each other can be juxtaposed to create a new meaning. Research shows that TV viewers react more slowly after unrelated cuts compared to related cuts, suggesting that processing the former requires increased cognitive load (Lang et al., 1993; Geiger & Reeves, 1993). Previous studies on delay have neglected non-diegetic delay, but have found that longer diegetic delay leads to higher level of suspense (de Wied, 1991; 1995; Doicaru, 2016; Kuijpers, 2014). To address this gap, the present study compares the effect of diegetic and non-diegetic delay on felt suspense and narrative absorption.

1.2. Felt suspense and narrative absorption

Felt suspense is a prospect-based emotion, experienced in relation to foreseen events that have not happened yet (Ortony, Clore, and Collins, 1988). Felt suspense involves hope for a foreseen positive outcome to take place and fear that the events will take a negative turn (see Chapter 4 of this volume). When it comes to consuming narratives, felt suspense is driven by readers' or

viewers' expectations regarding and desire to know the outcome of a story (Zillmann, 1991).

Felt suspense is closely associated with narrative absorption, which can be defined by an intense engagement with the story world, and the decreased awareness of the self and one's immediate surroundings (for a comprehensive account on narrative absorption see Chapter 2 of this volume). Some studies assume that felt suspense is related to certain forms of narrative absorption (Kinnebrock & Bilandzic, 2006; Kuijpers, 2014; Tal-Or & Cohen, 2010; Zillmann, 1996), or that it is a part of narrative absorption experiences (Green & Brock, 2000; Kuiken & Douglas, Chapter 11 of this volume). Below, we explore theoretical and empirical attempts to relate the two experiential states to each other.

First of all, both felt suspense (Brewer & Lichtenstein, 1982; Hoeken & van Vliet, 2000; Knobloch, Patzig, Mende, & Hastall, 2004; Knobloch-Westerwick & Keplinger, 2006) and narrative absorption (Busselle & Bilandzic, 2008; Green, Brock, & Kaufman, 2004; Oliver & Bartsch, 2010; Tal-Or & Cohen, 2010; Kuijpers, 2014) are considered to increase narrative enjoyment. Second, felt suspense and narrative absorption are also related through the fact that both involve focused attention on the events in the story world (e.g., Bezdek & Gerrig, 2016). All the available scales for narrative absorption include a "focused attention" component to capture attention focused on the story events

(Busselle & Bilandzic, 2009; Green & Brock, 2000; Kuijpers, Hakemulder, Tan, & Doicaru 2014). Similarly, research has shown that felt suspense narrows attention on specific events in the story world (Bezdek, Gerrig, Wenzel, Revill, & Schumacher, 2015; Bezdek & Gerrig, 2016). Third, felt suspense and narrative absorption both include readers' or viewers' emotional engagement with characters. However, one could argue that felt suspense is more emotional than cognitive: it is emotionally very intense, and research has shown that this characteristic requires a high level of cognitive resources, leaving no room for more elaborate cognitive processing (see Kron, Schul, Cohen, & Hassin, 2010; Ortony, Clore, & Collins, 1988; Tan & Diteweg, 1996). Narrative absorption, on the other hand, *can* involve emotional engagement, but can also be more cognitive and complex of nature. Furthermore, only if a reader values the outcome event of a story they will feel suspense. There are several factors that influence outcome value, according to Doicaru (2016): character likeability; outcome desirability/undesirability; and likelihood that an expected negative event will affect the protagonist (Comisky & Bryant, 1982; Zillmann, 1996; Brewer & Lichtenstein, 1982; Brewer & Ohtsuka, 1988; Gerrig & Bernardo, 1994; Moyer-Guse, 2008; Tan & Diteweg, 1996; Bezdek, 2012).

In summary, the close link between felt suspense and narrative absorption suggests that felt suspense may be part of narrative absorption. However, based on previous research we cannot argue this convincingly, since there is no

empirical evidence showing that readers or viewers cannot feel suspense without feeling absorbed in the narrative. On the other hand, empirical evidence is also lacking for the reverse argument.

Related to this issue, Kuijpers (2014) has found that adding delay to a printed story resulted in a higher level of felt suspense and narrative absorption than simply adding a priming initiating event to the beginning of the story. Kuijpers also reported high correlations between felt suspense and narrative absorption. However, manipulations influenced felt suspense and narrative absorption differently. Adding the delay did significantly increase felt suspense, but the increase in story world absorption was not significant. This suggests that felt suspense and narrative absorption are closely related, but are distinguishable experiential states. In Kuijpers' study, suspense strongly and significantly correlated highest with attention and emotional engagement, which indicates that these sub-dimensions are of special relevance to felt suspense.

Similarly, Doicaru (2016) has investigated the effect of diegetic delay on both felt suspense and narrative absorption in action-oriented and character-oriented film scenes. In line with previous studies (de Wied, 1991; 1995), Doicaru has found that diegetic outcome delay increased feelings of suspense, regardless of film genre. However, the outcome delay manipulations showed no effect on narrative engagement, which suggests, again, that felt suspense and

narrative absorption are distinct but related experiences. The length of outcome delay increased not only suspense, but also emotional engagement. In line with Kuijpers' (2014) findings, felt suspense therefore appears to be strongly associated with the emotional aspect of narrative engagement in film viewing. Doicaru (2016) has also found significant correlations between felt suspense and emotional engagement, which were significantly higher than the correlations between suspense and the other dimensions of narrative engagement (i.e., presence, focused attention, understanding). The correlation between suspense and overall narrative engagement was moderate (r = .44).

Continuing the line of Kuijpers's (2014) and Doicaru's (2016) research, this chapter introduces an experimental study that addresses and tries to solve the variance in results between studies, bringing both written narratives and film together in a direct comparison. The following research questions and hypotheses were tested:

RQ1: What is the relationship between narrative absorption and felt suspense?

H1: Felt suspense and narrative absorption are strongly and positively correlated.

H2: Felt suspense has the highest correlation with the subscale of emotional engagement, and lower correlations with the other dimensions.

No study has so far investigated how delaying materials that are external to the story world affect the level of suspense, though in order to draw a generalized conclusion that delay increases suspense, variance in types of delay should be taken into consideration. It can be assumed that non-diegetic delay draws attention to the construction of the narrative and disrupts the intensity of the experience; and as focused attention on the story is an important aspect of both suspense and narrative absorption, it is predicted that the level of suspense and narrative absorption would be lower in the non-diegetic delay condition. This leads to the following research questions and hypotheses:

RQ2: What is the effect of suspense structures on felt suspense?

H3: Suspense structure affects felt suspense. Non-diegetic suspense delay evokes lower level of felt suspense than diegetic suspense delay.

RQ3: What is the effect of suspense structures on narrative absorption?

H4: Suspense structure affects narrative absorption. Non-diegetic suspense delay evokes lower level of narrative absorption than diegetic suspense delay.

Media comparative research on narrative experience is scarce. One example is that of Green and colleagues (2008), who found that the medium of the narrative has an effect on narrative absorption in case of repeated exposures: the second exposure to the same narrative resulted in higher level of narrative absorption when reading preceded viewing compared to viewing preceded reading. Even though this does tell us something about the relationship between the two media narrative experiences, it leaves the media specific nature of narrative absorption unclear. In the present study we tested the following research questions regarding media format:

RQ4: What is the effect of media format on felt suspense?

RQ5: What is the effect of media format on narrative absorption?

RQ6: Does media format moderate the effect of suspense structures on felt suspense?

RQ7: Does media format moderate the effect of suspense structures on narrative absorption?

2. Method

2.1. Design & Procedure

In order to test the hypotheses and questions proposed above, an online experiment was conducted with a 2 (Suspense structure, Diegetic vs. Non-diegetic) × 2 (Media format, Film vs. Text) × 2 (Stories) between-subjects design. Participants read the informed consent and were randomly assigned to one version of the stimuli after which they were asked to answer questions about their experience.

2.2. Participants

Native English participants (N = 210) were recruited via Qualtrics, and were rewarded 8.5 USD for their participation. During data cleaning we removed participants who had seen or read the story already, who did not watch the entire clip, or who failed more than one out of five attention check items. The

final sample contained 146 participants (99 male). The average age of the sample was 47.41 (*SD* = 18.88). The distribution of highest level of education was the following: 62% secondary education, 29% bachelor level, 8% masters' level, 2% doctorate level.

2.3. Stimulus Material

The scenes selected for this experiment came from a pool of suspense films that were made after the year 2000, and were based on novels. The film scene from the movie *The Road* (Hillcoat, 2007) (5:56 minutes) presents the viewer with a post-apocalyptic world and follows the story of a father and a son who enter an empty house looking for food to survive. It turns out that the house is the home of cannibals who keep prisoners in the basement. The two protagonists have to escape before they are found. This film scene is closely based on the original novel from which the film is derived, *The Road*, by Cormac McCarthy (2006). The scene from the movie *Let me in* (Reeves, 2010) (6:04 minutes) tells a story of a young boy who is bullied during his swim training by a group of older boys. The bullies force him to stay underwater for several minutes until he almost drowns. This scene also closely follows the original novel (*Let the Right One In*, Lindqvist, 2007) in terms of plot, wording of dialogues, characters, and spatial location. We worked together with a

creative writer in order to make the literary scenes as similar as possible to the film scenes. From the literary scenes we removed those parts that were not depicted in the movie and added some lines of dialogues that were in the film. The materials selected for the experiment were suspense scenes containing a main initiating event and an outcome event. In the present experiment we manipulated the content of the inserted cuts yielding a diegetic and a non-diegetic delay. In the diegetic delay condition at three points of the movie, we inserted parallel events taken from the story into the ongoing event. In the non-diegetic delay version, we replaced the conventional parallel cuts with inserts (9-11 seconds) that were not there originally in the movie. The non-diegetic delay presented excerpts from an animation film ("The Owl" created by Emmanuel Ho) that shows a bird that tries to escape from a cage. For the literary version a professional poet created a poem (Falcsik, 2013). The poem followed the animation film very closely. As the two stories depicted protagonists who were trying to escape from a life-threatening situation, we assumed that this animated scene related to the consciousness of the protagonist on a metaphorical level (i.e., escape, struggle for surviving) as in intellectual montage. The inserts were applied three times between the initiating event and the outcome event of the suspense scene. The length (in seconds or in word counts) and the position of inserts were kept constant across all conditions.

2.4. Measures

Suspense Scale. The level of felt suspense was measured with the Suspense Scale (Doicaru, 2016); the items were modified in the literary condition. Six items, such as *"I was hoping that the protagonist would survive"* measured suspense on a 7-point Likert-type suspense scale where "1" indicated strong disagreement and "7" strong agreement. The scale showed good reliabilities (*M* = 5.48; S*D* = 1.33; *Cronbach's Alpha* = .87).

Story World Absorption Scale. Three subscales on the Story World Absorption Scale (Kuijpers et al., 2014) were used to measure levels of narrative absorption. Items were modified in the film condition. Four items, such as *"When I was reading the story I was focused on what happened in the story"* measured attention (*M* = 4.92; *SD* = 1.60). Five items, such as "*When I was reading the story it sometimes seems as if I were in the story world too*" measured transportation (*M* = 3.92; *SD* = 1.66). Five items, such as *"I felt connected to the main character in the story"* measured emotional engagement (*M* = 5.07; *SD* = 1.44). In all items "1" indicated strong disagreement and "7" strong agreement. The scale showed good reliability (*Cronbach's Alpha* = .95.).

Aesthetic Appreciation. Aesthetic appreciation was measured using four scale items that captured aesthetic value, memorability, discussion worthiness,

and unusual style. “1” indicated strong disagreement and “7” strong agreement (M = 5.06, SD = 1.59, *Cronbach’s Alpha* = .92).

Attention check. As an indicator of general attention allocated to the stories, we used five multiple-choice items, such as *“What was the weapon in the protagonist’s hand? - Knife, Rope, or Nothing”*. Participants had to give at least four good answers in order to be included into the sample of the study.

3. Results

As a first step, we tested the effect of manipulation on aesthetic value ratings using one-way ANOVA. Results showed no significant difference between experimental conditions in aesthetic appreciation ($F(7,150) = 1.47$, $p = .183$). Concerning the two different stories no significant difference emerged, they evoked a similar level of narrative absorption ($F(1, 142) = 0.29$, $p = .865$) and felt suspense ($F(1, 142) = 0.74$, $p = .393$). These results indicate that the stories had similar potential to evoke these experiences. Gender showed an effect on felt suspense ($t(149) = -2.38$, $p = .019$), but not on narrative absorption ($t(149) = -0.510$, $p = .610$), or the subscales of narrative absorption. Females (M = 5.67; SD = 1.34) reported higher levels of felt suspense than males (M = 5.13; SD =

1.26). None of the dependent variables correlated with the age or education of the participants ($p > .05$).

RQ1: What is the relationship between narrative absorption and felt suspense?

To answer the first research question on the relationship between narrative absorption and suspense, the data were submitted to correlational and partial correlational analyses. The correlations among felt suspense and the subscales of story world absorption were investigated. Confirming our hypothesis, felt suspense showed a significant correlation with story world absorption in general ($r = .73$, $p < .001$). Felt suspense correlated with attention ($r = .74$, $p < .001$), however this correlation decreased considerably ($r = .42$, $p < .001$) when controlling for emotional engagement and transportation. Felt suspense correlated with emotional engagement ($r = .69$, $p < .001$), however this correlation almost disappeared ($r = .19$, $p = .009$) when controlling for attention and transportation. Felt suspense correlated also with transportation ($r = .58$, $p < .001$), however this correlation became significantly negative ($r = -.14$, $p = .040$) when emotional engagement and attention were controlled. In order to get a deeper insight into this result, we conducted an additional partial correlational analysis with the five items of the transportation subscale and felt suspense while controlling for emotional engagement and attention. There were two items that had a significantly negative correlation with felt suspense, which

were the following *"When reading the story there were moments in which I felt that the story world overlapped with my own world"* (r = -.25, p = .001) and *"Because all of my attention went into the story, I sometimes felt as if I could not exist separate from the story"* (r = -.13, p = .54).

To explore how narrative absorption predicts felt suspense under different conditions, the data were also submitted to regression analysis. Model 1 included felt suspense as dependent variable and the subscales of narrative absorption as predictors. The analysis showed a significant positive linear relationship of emotional engagement and attention with felt suspense, and a significant negative relationship of transportation with felt suspense. Extending model 1, model 2 also included suspense structure, media format, story and gender as factors yielding a better goodness of fit (based on AIC value). The significant interaction effect of gender and emotional engagement on felt suspense suggests that the relationship between emotional engagement and felt suspense differs between male and female participants. Emotional engagement predicts felt suspense for female participants but not for male participants. Table 1 summarizes the results.

RQ2: What is the effect of suspense structures on felt suspense?

To answer the second research question we conducted a univariate ANCOVA for the effect of suspense structure on felt suspense. Because of the

significant effect of gender on felt suspense, we controlled for gender. Confirming our hypothesis, suspense structures showed a main effect on felt suspense ($F(1, 135) = 5.42$, $p = .02$, $\eta^2 = .04$). Scenes with non-diegetic suspense delay evoked lower suspense feelings ($N = 80$, $M = 5.17$, $SD = 0.15$) compared to scenes with a diegetic suspense delay ($N = 71$, $M = 5.68$, $SD = 0.16$). This result indicates that the level of felt suspense is higher in case of diegetic suspense compared to non-diegetic suspense.

	Model 1	Model 2
Intercept	2.09(0.26)**	.912(0.54)+
Subscales of Narrative Absorption		
Emotional Engagement	0.230(0.10)**	0.347(0.14)*
Attention	0.564(0.01)**	0.349(0.13)**
Transportation	-0.138(0.08)*	0.203(0.11)*
Factors		
Suspense structure	--	-0.247(0.49)
Media format	--	0.208(0.49)
Story	--	0.186(0.13)
Gender	--	1.1664(0.51)**
Interaction effects		
Media format (Film) × Attention	--	0.352(0.18)*
Media format × Transportation (Film)	--	-0.550(0.14)**
Gender × Emotional Engagement (Females)	--	-0.262(0.10)**
AIC	394.8	383.3
Likelihood Ratio Chi-Square	129.81**	159.30**

Table 1. Regression analysis. The table presents the standardized betas, standard errors (in brackets), the Akaike's Information Criterion (AIC) and the result of the omnibus test (Likelihood Ratio Chi-Square) from the models. Model 1 includes felt suspense as a dependent variable, whereas emotional engagement, attention and transportation were included as covariates. Model 2 included suspense structure, media format, story and gender as factors besides the covariates. The table presents only the significant interaction effects.

Note. ** p <.001; * p <.05; $^{+}$ p <.1

RQ3: What is the effect of suspense structures on narrative absorption?

To answer the third research question on the effect of suspense structure on narrative absorption, we conducted a univariate ANOVA. Suspense structure had a marginal effect on narrative absorption ($F(1, 143) = 3.11$, $p = .08$, $\eta^2 = .021$). Confirming our hypothesis, scenes with non-diegetic suspense delay elicited lower levels of narrative absorption ($N = 80$, $M = 4.41$, $SD = 0.16$) than scenes with diegetic delay ($N = 71$, $M = 4.84$, $SD = 0.18$). We also tested the effect of suspense structure on the subscales of narrative absorption. Suspense structure had no significant effect on emotional engagement ($F(1, 143) = 1.88$, $p = .17$) and transportation ($F(1, 143) = 1.55$, $p = .22$), but it influenced attention ($F(1, 143) = 5.37$, $p = .02$, $\eta^2 = .36$). Attention for non-diegetic suspense scene was lower ($M = 4.60$, $SD = 0.18$) than for the diegetic suspense scene ($M = 5.22$, $SD = 0.19$). These results indicate that non-diegetic suspense structures decreases the level of attention to story events in viewers.

RQ4: What is the effect of media format on felt suspense?

To answer the fourth research question on the effect of media format on felt suspense, a univariate ANCOVA was conducted. We controlled for gender. Media format had no significant effect on felt suspense ($F(1, 135) = 1.01$, $p = .29$, $\eta^2 = .01$), indicating that literary and cinematic versions of the suspense scenes elicited similar levels of felt suspense (suspense in literature group: $M =$

5.59, *SD* = 0.16; suspense in film group: *M* = 5.37, *SD* = 0.15). These results indicate that media format does not influence the level of felt suspense.

However, significant interaction effects between media format and the sub-scales of story world absorption on felt suspense did occur. The interaction between media format and attention on suspense, for example, indicates that the relation of attention on suspense is different in the two media formats. The result shows that in the case of literature attention does not predict felt suspense, whereas in the case of film it does predict it positively (i.e., higher level of attention leads to higher level of felt suspense). Similarly, the significant interaction of media format and transportation on felt suspense indicates that the relationship between transportation and felt suspense differs across media. In the case of literature, transportation does not predict felt suspense, whereas in the case of film, higher levels of transportation are associated with lower levels of felt suspense.

RQ5: What is the effect of media format on narrative absorption?

To answer the fifth research question on the effect of media format on narrative absorption, we conducted a univariate ANOVA. Media format had no effect on narrative absorption ($F(1, 143) = 1.80$, $p = .18$, $\eta^2 = .01$). Literary versions of the suspense scene evoked similar levels of narrative absorption (*N* = 73, *M* = 4.79, *SD* = 0.18) to cinematic versions (*N* = 78, *M* = 4.46, *SD* =

0.17). We also tested the effect of media format on the subscales of narrative absorption. Media format had no influence on attention ($F(1, 143) = 0.599$, $p = .44$), emotional engagement ($F(1, 143) = 2.48$, $p = .12$), and transportation ($F(1, 143) = 2.05$, $p = .15$). These results indicate that media format does not influence the level of narrative absorption.

Related to the fourth and fifth research questions, we found a significant interaction effect of story type and medium on felt suspense ($F(1, 135) = 9.67$, $p = .002$, $\eta^2 = .07$), as well as on narrative absorption ($F(1, 143) = 5.12$, $p = .03$, $\eta^2 = .04$). In the case of both suspense and narrative absorption the format of medium moderated the effect of the two stories. In the case of *The Road* the film was less engaging than the novel, whereas in the case of *Let me in* there was no difference between media formats. These results indicate that the effect of media format on absorption and felt suspense differs according to the story that has been shown.

RQ6: Does media format moderate the effect of suspense structures on felt suspense?

To answer the sixth research question on the moderating effect of media format on the effect of suspense structure on narrative absorption, we conducted a univariate ANOVA. Results showed no interaction effect between media format and suspense structure was found on narrative absorption, which

indicates that media format does not moderate the effect of suspense structure on narrative absorption.

RQ7: Does media format moderate the effect of suspense structures on narrative absorption?

To answer the seventh research question whether media format moderates the effect of suspense structure on felt suspense, we conducted a univariate ANOVA. No interaction effect between media format and suspense structure was found on narrative absorption. These results indicate that media format does not moderate the effect of suspense structure on absorption or suspense.

4. Discussion

The primary aim of the present study was to investigate the effect of suspense structure and media format on narrative absorption and felt suspense, as well as to further the understanding of how the constructs of narrative absorption and felt suspense relate to each other. To this end, an online between-subject experiment was conducted. Results revealed a complex relationship among felt suspense, and the dimensions of narrative absorption (attention, emotional engagement, and transportation) emphasizing the

importance of attention in felt suspense, and showing a moderating effect of media format and gender. Findings indicate that non-diegetic suspense delay compared to diegetic suspense delay decreases felt suspense and narrative absorption independently of media format.

4.1. Relation between suspense and absorption

The results confirm our assumption that felt suspense and narrative absorption are strongly corresponding experiences. In line with previous findings, felt suspense showed a high level of positive correlation with all subscales of narrative absorption. However, the results of a partial correlation analysis shows that felt suspense, attention, emotional engagement and transportation have a complex relationship with each other. The most important finding is that attention has a moderately strong correlation with felt suspense even after controlling for emotional engagement and transportation. It accounts for 18 % of the variance in felt suspense, whereas emotional engagement accounts for 3 %. This finding is in line with our expectations based on previous research, which showed that both suspense and narrative absorption narrow down attention on specific events in the story (e.g., Bezdek et al., 2015; Bezdek & Gerrig, 2016). The most surprising result is the significant negative relationship of transportation with felt suspense when controlling for attention

and emotional engagement. This result indicates that the positive correlation between felt suspense and transportation is accounted for by emotional engagement and attention, and when we control for their effects, the unique correlation accounted for by transportation is negative. Additional analysis revealed that the average score of transportation was significantly lower than emotional engagement or attention, and that the following transportation item 'When reading the story there were moments in which I felt that the story world overlapped with my own world', has a larger contribution to these results accounting for 6 % in the variance of felt suspense. It is noteworthy that the transportation items overall seem to be very metaphoric, suggesting a dream-like state in the story world, which may be too far from the everyday experience of some of the participants. For the time being we do not know if this negative relationship is a specific characteristic of the current sample, a result of a mismatch between *film* content and scale items, or expresses a generalizable result.

The regression analyses revealed an even more complex picture of the relationship of felt suspense and narrative absorption. Attention, emotional engagement and transportation seem to be good predictors of felt suspense, although the effect of them on felt suspense is dependent on the suspense structure conditions. Attention was found to predict positively felt suspense in general, that is higher level of attention leads to higher level of felt suspense.

However, it seems that watching and reading a suspenseful story are very different conditions in this regard. The result shows that in case of textual narratives attention does not predict felt suspense, whereas in case of film a positive relationship emerges (i.e., more attention leads to higher level of felt suspense). It seems that media format has an impact on the function of attentional processes in suspenseful experiences. The attentional processes involved in reading and viewing may explain this finding. In Chapter 6 of this volume it is discussed in detail that even the simple act of reading requires focused attention independently of the emotional experience. Whereas in case of viewing a film, the sense of focused attention is tied more to the emotional experience because the images can roll in front of our eyes without us actually paying attention, in other words, viewers have more freedom to look elsewhere while the story unfolds.

Media format also moderated the relationship between transportation and felt suspense, showing that transportation is a better predictor of felt suspense in the case of watching compared to reading a story. As we discussed above, in the current sample transportation negatively predicts felt suspense, and this effect seems to be more pronounced in the case of viewing a film. One explanation might be that viewers down-regulate their transportation experiences in case of highly suspenseful stories. That is why it is important to study suspense structures with a positive outcome, to see whether transportation still correlates

negatively with felt suspense when there is no threat to the character and thus the viewer is more driven by hope than by fear. Additionally, the difference between the two media formats may come from the different level of control they have on the reception process. By default, audio-visual narratives have more control over the pace of viewing, whereas the pace of processing a literary narrative is more reader-controlled. It seems that up- and down-regulation of the intensity of the experience can occur both during reading and viewing, however these regulatory processes are executed through different behaviors across media. The experimental setting of the present study reflected this difference as well. Participants did not have the option to pause the video unless they quit the experiment, whereas the pace of reading was self-controlled.

Emotional engagement was found to be a good predictor of felt suspense in general. However, it seems that this relationship differs across the gender of the participants: emotional engagement relates to felt suspense negatively in the case of female participants, but not in the case of male participants. One explanation may be that felt suspense is a self-oriented high intensity experience, that is more related to processes of emotional contagion, emotional empathy that is sharing (simulating) the emotional experience of characters. By contrast, emotional engagement, as it was measured in the current study, is an other-oriented process, and may have closer links to the understanding of the emotional states of the character. Previous studies on film viewing have showed

that the high intensity of experiencing a mental state of another person could block functions responsible for understanding those mental states (Raz et al, 2014). It seems that the dissociation of emotional engagement and felt suspense is specific to females in the current study.

4.2. The effect of suspense structure on felt suspense and narrative absorption

The second and third research question reflected on the effect of suspense structure on narrative absorption and felt suspense. The findings show that manipulation of suspense structure influenced both narrative absorption and felt suspense in similar directions. Non-diegetic delay evoked a lower level of narrative absorption and felt suspense compared to diegetic delays. This finding elucidates the importance of suspense structure in felt suspense. Previous results have shown that delaying the outcome event increases felt suspense (e.g., Kuijpers, 2014; Doicaru, 2016). These studies, however, employed only diegetic (more conventional) delay structures. It seems that non-diegetic delays are less suitable for increasing felt suspense or narrative absorption. However, suspense structure affected only the subscale of attention, but not emotional engagement and transportation. This is in line with previous findings that have shown attention to be a key component in processing an engaging story (Bezdek, 2012; Bezdek & Gerrig, 2016). However, our result contradicts others

that have found increased attention in case of semantically unrelated segments (Geiger & Reeves, 1993). In order to understand this contradiction, we have to differentiate attention as a mental process (i.e., allocated cognitive load as in Geiger & Reeves, 1993) from attention as a subjective experience of being fully concentrated on a narrative, as in our study (Nell, 1988). It can be assumed that comprehending a non-diegetic insert requires larger amount of allocated cognitive load and, at the same time, it breaks the natural flow of the events, therefore disrupting the subjective experience of attention. However, the disruption of the subjective experience of attention does not lead to decreased emotional engagement or transportation, which suggests that non-diegetic suspense delay does not fully ruin the experience of narrative absorption, but rather affects the attentional component of it. It seems that the different components of narrative absorption have different levels of sensitivity to changes in suspense structure. The discussion on the different types of absorption experiences (i.e., story world and artifact absorption) in Chapter 1 and Chapter 2 of this volume can provide further explanation to these findings.

4.3. The effect of media format on felt suspense and narrative absorption

The present findings suggest that media format has no significant effect on felt suspense and narrative absorption. Cinematic and literary versions evoked

similarly high level of responses, which indicates that suspenseful plots are perceived as being suspenseful independently of the media format. This is in line with the assumption that narrative structures are of higher importance than media format in evoking a suspenseful narrative experience (e.g., Doicaru, 2016). Well-structured films and books have equal potential to elicit absorbing experiences in audience members. However, a significant interaction effect revealed that the stories moderated the effect of media format on felt suspense and narrative absorption. In case of *The Road,* the film evoked lower levels of felt suspense and narrative absorption than the novel, whereas in case of *Let me in* there was no difference between media formats. This result indicates that the media format is of lower importance in general. However, some stories come through more effectively in one of the two media. One possible explanation for this difference may lie in the difference in the style of the two stories. Both the written and the cinematic version of *Let Me In* were made in a relatively mainstream style without any deviating elements. The cinematic version of *The Road* is also relatively "mainstream", whereas the written version of *The Road* is a highly foregrounded text, with unusual sentence structures. In other words the style used in the two media formats in the case of *Let me in* were more similar to each other than in the case of *The Road*.

Additionally, males and females differed in their reported experiences. The former reported higher levels of felt suspense than the latter, however in the

level of narrative absorption there was no difference between genders. This finding indicates that females were more affected by the suspense element of the narratives. In both narratives the life of a young boy at around the age of 8-12 years was threatened (in *Let me in* by peers, in *The Road* by other adults). It can be assumed that females react to the depiction of a child in danger with higher intensity than males. Our results are in line with previous studies that have showed that compared to males, females tend to report higher level of disturbance and empathy when watching violent scenes (Oliver, Sargent, & Weaver, 1998). This result may also suggest a theoretical relationship between felt suspense and empathy.

4.4. Limitations and recommendations

Some of the limitations of the present study have to be acknowledged. First, even though this was unavoidable, due to the fact that films are harder to manipulate than literature, the manipulations we used had stronger connections to the filmic media format than the literature format. The combination of diegetic and non-diegetic sources is quite common in films, and the differentiation between the two types of techniques is relatively straightforward, unlike in literature. Future studies may attempt to use manipulation techniques that are inherent to both media formats. Additionally,

it would be also interesting to investigate the role of semantic connection between delay and outcome events with finer-grained manipulations. Second, we assessed narrative absorption with three subscales of the story world absorption scale, and like other studies (e.g., Bezdek & Gerrig, 2016) we decided to leave out the mental imagery subscale, as it does not apply to film reception. However, according to other researchers (e.g., Appel, Gnambs, Richter, & Green, 2015), mental imagery captures an important element of film viewing. It is thus possible that we may have lost an important source of information when we left out this scale. Third, the present study included only suspenseful stories with negative valence; therefore we cannot generalize these results to suspense stories with positively valenced outcomes. Fourth, as the present experiment did not employ a control condition (i.e., a story without suspense delay), we do not know whether non-diegetic delay structure completely destroys the feeling of suspense, or only increases it less relative to diegetic delay structure. Fifth, only two stories were included in the experiment, and that may limit the generalizability of the findings to other contents.

4.5. Suggestions for further research

The studies reported in this chapter indicate a close relationship between suspense and dimensions of narrative absorption. However, as they were only

able to explore correlations between the two concepts, further research is needed to investigate the possibility that suspense is a part of narrative absorption. As a next step, we suggest that their relationship should be further investigated using psychometric research methods, which involve an exploration of underlying structures of conceptual models. We could then determine whether suspense is 1) part of the structure of narrative absorption, and 2) more related to emotional engagement or attention. It could even determine whether suspense, like narrative absorption, is a multifaceted construct and thus one part would perhaps relate to emotional engagement, whereas another one would relate to attention.

5. Conclusion

This study contributes to the understanding of how suspense structure and media format impact two important aspects of the narrative experience: felt suspense and narrative absorption. The study extends the research into suspense structures by including both diegetic and non-diegetic delay into the investigation, and it demonstrates that the experience of felt suspense and narrative absorption, can be shaped by the type of delay employed in the story. It seems that non-diegetic delay compared to diegetic delay has less potential to

increase the intensity of these responses. The accurate manipulation has enabled the direct comparison of textual and audio-visual presentation of suspense stories. Our findings demonstrate the relative importance of narrative structure to media format in the experience with suspenseful narratives. Well-structured books and films have equal potential to engage audience members. Additionally, our findings give insight into the complex relationships of felt suspense with the components of narrative absorption, i.e., with attention, emotional engagement, and transportation. Our study has elucidated that the predicting potential of narrative absorption is dependent on media format and gender. It seems that the relationship between felt suspense and narrative absorption differs across films and texts, as well as across males and females. The study has also shown that the level of self-reported attention has a special importance for predicting felt suspense. These findings help to distinguish between the overlapping constructs of felt suspense and the components of narrative absorption in responses to literary and cinematic narratives.

References

Appel, M., Gnambs, T., Richter, T., & Green, M. C. (2015). The Transportation Scale–Short Form (TS–SF). *Media Psychology, 18*(2), 243-266. doi: 10.1080/15213269.2014.987400

Armbrust, T. (Producer) and Reeves, M. (2010). *Let me in*. [Motion Picture]. United States and United Kingdom: Overture Films.

Bálint, K., & Tan, E. S. (2015). "It feels like there are hooks inside my chest": The Construction of Narrative Absorption Experiences Using Image Schemata. *Projections*, *9*(2), 63-88. doi: 10.3167/proj.2015.090205

Bezdek, M. A. (2012). *Changes in attentional focus during suspenseful film viewing* (Unpublished doctoral dissertation). State University of New York at Stony Brook, NY, USA.

Bezdek, M. A., & Gerrig, R. J. (2016). When narrative transportation narrows attention: Changes in attentional focus during suspenseful film viewing. *Media Psychology*, 1-30.

Bezdek, M., Gerrig, R., Wenzel, W., Shin, J., Revill, K. P., Schumacher, E. (2015). Neural evidence that suspense narrows attentional focus. *Neuroscience, 303:* 338–345. doi: 10.1016/j.neuroscience.2015.06.055

Brewer, W. F., & Lichtenstein, E. H. (1982). Stories are to entertain: A structural-affect theory of stories. *Journal of Pragmatics, 6(5)*, 473-486. doi: 10.1016/0378-2166(82)90021-2

Brewer, W. F., & Ohtsuka, K. (1988). Story structure, characterization, just world organization, and reader affect in American and Hungarian short stories. *Poetics, 17(4),* 395-415. doi: 10.1016/0304-422x(88)90043-5

Busselle, R., & Bilandzic, H. (2009). Measuring narrative engagement. *Media Psychology, 12(4),* 321-347. doi: 10.1080/15213260903287259

Butan, M. (Producer) and Hillcoat, J. (Director). (2007). *The Road*. [Motion Picture]. United States: Dimension Films.

Chatman, S. B. (1980). *Story and discourse: Narrative structure in fiction and film*. Ithaca: Cornell University Press.

Comisky, P., & Bryant, J. (1982). Factors involved in generating suspense. *Human Communication Research, 9,* 49-58. doi: 10.1111/j.1468-2958.1982.tb00682.x

Doicaru, M.M. (2016). *Gripped by movies. From story-world to artifact absorption* (Unpublished doctoral dissertation). University of Amsterdam, Amsterdam, The Netherlands.

Eisenstein, S. (1977). *Film form: Essays in film theory* (2nd ed.). New York (NY) & London (UK): A Harvest/HBJ Book Harcourt Brace Jovanovich.

Falcsik, M. (2013). Húszévesen. In: Változatok a szabadságra, Budapest: Magvető.

Geiger, S., & Reeves, B. (1993). The effects of scene changes and semantic relatedness on attention to television. *Communication Research*, *20*(2), 155-175. doi: 10.1177/009365093020002001

Gerrig, R. J., & Bernardo, A. B. (1994). Readers as problem-solvers in the experience of suspense. *Poetics, 22(6),* 459-472.

Graaf, A. de, & Hustinx, L. (2011). The effect of story structure on emotion, transportation, and persuasion. *Information Design Journal, 19,* 142–154. Retrieved from: http://hdl.handle.net/2066/94729

Green, M. C., & Brock, T. C. (2000). The role of transportation in the persuasiveness of public narratives. *Journal of Personality and Social Psychology*, *79*(5), 701. doi: 10.1037/0022-3514.79.5.701

Green, M. C., Brock, T. C., & Kaufman, G. F. (2004). Understanding media enjoyment: The role of transportation into narrative worlds. *Communication Theory*, *14*(4), 311-327. doi: 10.1111/j.1468-2885.2004.tb00317.x

Green, M. C., Kass, S., Carrey, J., Herzig, B., Feeney, R., & Sabini, J. (2008). Transportation across media: Repeated exposure to print and film. *Media Psychology, 11*(4), 512-539. doi: 10.1080/15213260802492000

Hoeken, H., & Van Vliet, M. (2000). Suspense, curiosity, and surprise: How discourse structure influences the affective and cognitive processing of a

story. *Poetics, 27(4),* 277-286. Retrieved from: http://hdl.handle.net/2066/82888

Kinnebrock, S. & Bilandzic, H. (2006. June). How to make a story work: Introducing the concept of narrativity into narrative persuasion. Paper presented at the 56th yearly *International Communication Association Conference*, Dresden, Germany. Retrieved from http://publications.rwth-aachen.de/record/50885/files/3638.pdf

Knobloch, S., Patzig, G., Mende, A. M., & Hastall, M. (2004). Affective news effects of discourse structure in narratives on suspense, curiosity, and enjoyment while reading news and novels. *Communication Research*, 31(3), 259-287. doi: 10.1177/0093650203261517

Knobloch-Westerwick, S., & Keplinger, C. (2006). Mystery appeal: Effects of uncertainty and resolution on the enjoyment of mystery. *Media Psychology*, *8*(3), 193-212. doi: 10.1207/s1532785xmep0803_1

Knobloch-Westerwick, S., & Keplinger, C. (2008). Murder for pleasure: Impacts of plot complexity and need for cognition on mystery enjoyment. *Journal of Media Psychology, 20*(3), 117-128. doi: 10.1027/1864-1105.20.3.117

Kron, A., Schul, Y., Cohen, A., Hassin, R., R. (2010). Feelings don't come easy: Studies on the effortful nature of feelings. *Journal of Experimental Psychology General, 139,* 520–34. doi: 10.1037/a0020008

Kuijpers, M. M. (2014). *Absorbing stories. Effects of textual devices on absorption and evaluative responses* (Unpublished doctoral dissertation). Utrecht University.

Kuijpers, M.M., Hakemulder, F., Doicaru, M.M., Tan, E.S. (2014). Exploring absorbing reading experiences. Developing and validating a self-report scale to measure storyworld absorption. *Scientific Study of Literature, 4(1),* 89-122. doi: 10.1075/ssol.4.1.05kui

Lang, A., Geiger, S., Strickwerda, M., & Sumner, J. (1993). The effects of related and unrelated cuts on television viewers' attention, processing capacity, and memory. *Communication Research*, *20*(1), 4-29. doi: 10.1177/009365093020001001

Lindquist, A. (2007). *Let the right one in.* New York: Thomas Dunne Books.

Lowenstein, G. (1994). The psychology of curiosity: A review and reinterpretation. *Psychological Bulletin, 116(1),* 75-98.

McCarthy, C. (2006). *The Road.* Vintage Books.

Moyer-Guse, E. (2008). Toward a theory of entertainment persuasion: Explaining the persuasive effects of entertainment education messages. *Communication Theory, 18*(3), 407-425. doi: 10.1111/j.1468-2885.2008.00328.x

Nell, V. (1988). *Lost in a book: The psychology of reading for pleasure.* London, UK: Yale University Press.

Oliver, M. B., & Bartsch, A. (2010). Appreciation as audience response: Exploring entertainment gratifications beyond hedonism. *Human Communication Research, 36*(1), 53-81. doi: 10.1111/j.1468-2958.1993.tb00304.x

Oliver, M. B., Sargent, S. L., & James III, B. (1998). The impact of sex and gender role self-perception on affective reactions to different types of film. *Sex Roles*, *38*(1-2), 45-62. doi: 10.1023/A:1018760427785

Ortony, A., & Clore, G. L. A. Collins (1988). *The cognitive structure of emotions.* Cambridge, UK: Cambridge University Press.

Pramaggiore, M., & Wallis, T. (2005). *Film: a critical introduction*. Laurence King Publishing.

Raz, G., Jacob, Y., Gonen, T., Winetraub, Y., Flash, T., Soreq, E., & Hendler, T. (2014). Cry for her or cry with her: context-dependent dissociation of two modes of cinematic empathy reflected in network cohesion dynamics. *Social cognitive and affective neuroscience*, *9*(1), 30-38. doi: 10.1093/scan/nst052

Sternberg, M. (1993). *Expositional modes and temporal ordering in fiction.* Bloomington, IN: Indiana University Press.

Tal-Or, N., & Cohen, J. (2010). Understanding audience involvement: Conceptualizing and manipulating identification and transportation. *Poetics*, *38*(4), 402-418. doi: 10.1016/j.poetic.2010.05.004

Tan, E. S., & Diteweg, G. (1996). Suspense, predictive inference, and emotion. In P. Vorderer, H. J. Wulff, & M. Friedrichsen, *Suspense: Conceptualizations, theoretical analyses, and empirical explorations* (pp. 149-188). Mahwah, NJ: Lawrence Erlbaum Associates.

Zillman, D., & Cantor, J. R. (1977). Affective responses to the emotions of a protagonist. *Journal of Experimental Social Psychology*, *13*(2), 155-165. doi: 10.1016/S0022-1031(77)80008-5

Zillmann, D. (1991). Empathy: Affect from bearing witness to the emotions of others. In J. Bryant & D. Zillmann (Eds.), *Responding to the screen: Reception and reaction processes* (pp. 135-167). New York, NY: Routledge.

Zillmann, D. (1996). The psychology of suspense in dramatic exposition. In P. Vorderer, W. J. Wulff , & M. Friedrichsen (Eds.), *Suspense: Conceptualizations, theoretical analyses, and empirical explorations* (pp. 199-231). Mahwah, NJ: Lawrence Erlbaum Associates.

Wied, M. de (1991). *The role of time structures in the experience of film suspense and duration* (Unpublished doctoral dissertation). University of Amsterdam.

Wied, M. de (1995). The role of temporal expectancies in the production of film suspense. *Poetics*, *23*(1), 107-123. doi: 10.1016/0304-422x(94)00007-s